Abstract

A system is provided for guiding the selection of a value for each of a plurality of parameters needed to perform a procedure with a medical system (100). The system includes a first knowledge base (210) comprising procedures and treatment regimes, a second knowledge base (212) comprising patient information and therapy history, and a third knowledge base (214) comprising clinical guidelines. A domain ontology (220) provides the semantic mapping between information in the first, second, and third knowledge bases. A system configuration database (226) contains physical characteristics pertaining to the medical system and a system characteristics database (228) contains mathematical formulas and algorithms for calibrating the medical system based on the data in the system configuration database. An interference engine (224) is also provided for generating a set of parameters based on the information in the first, second, and third knowledge bases, the system configuration database, and the system characteristics database.